

DT01 Rec'd PCT/PTC 04 FEB 2005

PTO/SB/08a (05-03)

Approved for release through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

#3

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1

of

2

Complete If Known

| | |
|------------------------|------------------|
| Application Number | Not Yet Assigned |
| Filing Date | February 4, 2005 |
| First Named Inventor | Roland Liebe |
| Art Unit | Not Yet Assigned |
| Examiner Name | Not Yet Assigned |
| Attorney Docket Number | 2002P13083WOUS |

10/523512

U.S. PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---------------------|-----------------------|--|--------------------------------|--|---|
| | | Number - Kind Code ² (if known) | | | |
| 10 | 1 | US- 5,525,269 | 06-11-1996 | Connolly et al. | |
| 10 | 2 | US- 5,486,091 | 01-23-1996 | Sharma | |
| 10 | 3 | US- 3,475,108 | 10-28-1969 | Zickuhr | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |
| | | US- | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ³ |
|---------------------|-----------------------|--|--------------------------------|---|--|----------------|
| | | Country Code ³ - Number ⁴ - Kind Code ⁵ (if known) | | | | |
| 10 | 4 | CH 652 452 A5 | 11-15-1985 | Landustrie Sneek Machinefabriek Elektrotechnik B.V. | | |
| | 5 | DE 33 43 296 A1 | 06-05-1985 | Theod. Mahr Söhne GmbH | | |
| | 6 | DD 215 155 | 10-31-1984 | Ingenieurhochschule Zittau | | |
| | 7 | GB 763,359 | 12-12-1956 | Joseph Lucas Industries Limited | | |
| | 8 | DE 900 526 | 12-28-1953 | Liebe | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Examiner
Signature

T. h. h.

Date
Considered

11/06

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

DT01 PTO

04 FEB 2005

PTO/SB/08b(05-03)

Approved for use through 04/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 2 of 2

Complete if Known

| | |
|------------------------|------------------|
| Application Number | Not Yet Assigned |
| Filing Date | February 4, 2005 |
| First Named Inventor | Roland Liebe |
| Group Art Unit | Not Yet Assigned |
| Examiner Name | Not Yet Assigned |
| Attorney Docket Number | 2002P13083WOUS |

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|------------------------|--------------------------|--|----------------|
| R | 9 | F. DIDIER, R. DÉNOS, T. ARTS, "Unsteady Rotor Heat Transfer in a Transonic Turbine Stage", ASME TURBO EXPO 2002, GT-2002-30195, June 3-6, 2002, pages 319-329, Netherlands. | |
| | 10 | WITOLD EISNER, DROBNIAK STANISLAW, "The Nonstationary Behaviour of Stator Profile Boundary Layer Excited by Periodic Upstream Wakes", ASME TURBO EXPO 2002, GT-2002-30234, June 3-6, 2002, pages 673-680, Netherlands. | |
| | 11 | SANG WOO LEE, SANG BAE JUN, BYUNG-KYU PARK, JOON SIK LEE, "Effects of High Free-Stream Turbulence on the Near-Wall Flow and Heat/Mass Transfer on the Endwall of a Linear Turbine Rotor Cascade", ASME TURBO EXPO 2002, GT-2002-30187, June 3-6, 2002, pages 231-243, Netherlands. | |
| | 12 | R. LIEBE, "Validation of the Finite Vortex Model by Analyzing Unsteady Aerodynamic Experiments", Design and Nature Conference, 2002, 10 pages, Italy. | |
| | 13 | R. LIEBE, W. LIEBE, "A General Finite Vortex Model to Describe Unsteady Aerodynamics in Nature", Design and Nature Conference 2002, 10 pages, Italy. | |
| | 14 | W. HEINKE, B. MATYSCHOK, B. STOFFEL, K. HEINIG, A. FIALA, "Numerische Simulation und experimentelle Untersuchungen zum Clocking-Effekt", 7. Seminar of AG Turbo, December 7 & 8, 2000, pages 11-1 thru 11-12, Germany. | |
| | 15 | H.-P. SCHIFFER, F. HASELBACH, L. FOTTNER, "Hochbelastete ungekühlte Turbinenbeschaufelung", 7. Seminar of AG Turbo, December 7 & 8, 2000, pages 5-1 thru 5-16, Germany. | |
| | 16 | LIEBE, W, "Die Schwingende Hinterkante Als Auftriebshilfe und Zur Verminderung des Widerstands am Tragflügel", DGLR-JT99-088, 1999, pages 285-290, Germany. | |
| | 17 | DOUGLAS L. SONDAK, DANIEL J. DORNEY, "Simulation of Vortex Shedding in a Turbine Stage", ASME 98-GT-242, International Gas Turbine & Aeroengine Congress & Exhibition, June 2-5, 1998, pages 1-10, Sweden. | |
| | 18 | PETER FREYMUTH, KARL E. GUSTAFSON, ROBERT LEBEN, "Visualization and Computation of Hovering Mode (Vortex Dynamics)", 1991, pages 143-169, USA. | |
| | 19 | K. DULLENKOPF, A. SCHULZ, S. WITTIG, "Einfluß periodisch instationärer Zuströmbedingungen auf den zeitlich gemittelten Wärmeübergang an Turbinenschaufeln", 2. Statusseminar der Arbeitsgemeinschaft Hochtemperatur-Gasturbine, November 22 & 23, 1990, pages 85-97, Germany. | |
| | 20 | D.R. POLING, D.P. TELIONIS, "The Response of Airfoils to Periodic Disturbances - The Unsteady Kutta Condition", AIAA Journal, February 1986, pages 193-199, Vol. 24, No. 2, USA. | |
| | 21 | W.J. McCROSKEY, L.W. CARR, K.W. McALISTER, "Dynamic Stall Experiments on Oscillating Airfoils", AIAA Journal January 1976, pages 57-63, Vol. 14, No. 1, USA. | |
| | 22 | WOLFGANG LIEBE, "Der Schwanzschlag der Fische", VDI-Z. 105, October 1963, pages 1298-1302, Nr. 28, Germany. | |

Examiner
Signature

T. R. N.

Date
Considered

11/06

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.